Spectroscopic Binary Star Studies with the Palomar Testbed Interferometer II

A.F. Boden and B.F. Lane

The Palomar Testbed Interferometer (PTI) is a long-baseline near-infrared interferometer located at Palomar Observatory. Following our previous work on resolving spectroscopic binary stars with the Palomar Testbed Interferometer (PTI), we will present a number of new visual and physical orbit determinations derived from integrated reductions of PTI visibility and archival radial velocity data. The six systems for which we will present new orbit models are: 12 Boo (HD 123999), 75 Cnc (HD 78418), 47 And (HD 8374), HD 205539, BY Draconis (HDE 234677), and 3 Boo (HD 120064). Most of these systems are double-lined binary systems (SB2), and integrated astrometric/radial velocity orbit modeling provides precise fundamental parameters (mass, luminosity) and system distance determinations comparable with Hipparcos precisions.

Keywords for indexing: **techniques—interferometry, binary stars**